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Study Specific Acronyms and Abbreviations

AMTRAK	National Railroad Passenger Corporation
AOZ	Aquifer Overlay Zone
ac	acre(s)
B/C	Benefit to Cost Ratio
BD	Business Development District
BuB	Buxton Silt Loam, 3 to 8 percent slope
CL	Crop Land
CMP	Central Maine Power
CRF	Critical Rate Factor
DEA	Draft Environmental Assessment
DEP	Maine Department of Environmental Protection
DOT	U.S. Department of Transportation
EA	Environmental Assessment
EmB	Elwood Fine Sandy Loam, 0 to 8 percent slopes
ft	feet
FMVECP	Federal Motor Vehicle Emission Control Program
FONSI	Finding of No Significant Impact
GWD	Gray Water District
HF	Hayfield
HIB	Hinckley Gravelly Sandy Loam, 3 to 8 percent slopes
ha	hectare
km	kilometer(s)
LOS	Level of Service
LWCF	Land and Water Conservation Fund
m	meter(s)
MD	Medium Density District
MDOL	Maine Department of Labor
MF	Mixed Forest
mi	mile(s)
MkB	Merrimac Fine Sandy Loam, 3 to 8 percent slopes
MOE	Measures of Effectiveness
MSA	Metropolitan Statistical Area
MTA	Maine Turnpike Authority
NHL	National Historic Landmarks
NPDES	National Pollutant Discharge Elimination System
PAC	Public Advisory Committee
Pb	Lead
PEM	Palustrine Emergent
PFO	Palustrine Forested
PK	Peak
PSS	Palustrine Scrub/Shrub
PUB	Palustrine Unconsolidated Bottom Wetland
RRA	Rural Residential and Agricultural District
SF	Softwood Forest
SL	Shrub Land
STF	Summary Tape File
STIP	Statewide Transportation Improvement Program
Sz	Swanton fine sandy loam

UL	Urban Land
USDOT	United States Department of Transportation
UST	underground storage tank
VAP	Village Aquifer Protection District
v/c	volume/capacity ratio
WH	Wellhead
WH1	Wellhead Protection District #1
WH2	Wellhead Protection District #2
WmB	Windsor Loamy Sand, 0 to 8 percent slopes

Standard Acronyms and Abbreviations

AADT – Annual Average Daily Traffic
AASHTO – American Association of State Highway and Transportation Officials
ACHP – Advisory Council on Historic Preservation
ACOE – United States Army Corps of Engineers
AFDC – Aid to Families with Dependent Children
ARAN – Automatic Road Analyzer
ATR – Automatic Traffic Recorder
ATV – All Terrain Vehicle
BMP – Best Management Practice
BTIP – Biennial Transportation Improvement Program
CAAA – Clean Air Act Amendments of 1990
CAL3QHC – EPA’s Modeling Methodology for Predicting Pollutant Concentrations near Roadway Intersections
CBER – Center for Business and Economic Research
CEQ – Council on Environmental Quality
CERCLIS – Comprehensive Environmental Response, Compensation and Liability Information System
CFR – Code of Federal Regulations
CO – Carbon monoxide
CRF – Crash Rate Factor
dBA – Loudness (sound pressure level) measured on a logarithmic scale in units of decibels (dB), using an A-weighted filter
DEIS – Draft Environmental Impact Statement
DHV – Design Hour Volume
E & T List – Official List of Endangered and Threatened Plants in Maine
EFH – Essential Fish Habitat
EIS – Environmental Impact Statement
EPA – U.S. Environmental Protection Agency
FEIS – Final Environmental Impact Statement
FEMA – Federal Emergency Management Agency
FHWA – Federal Highway Administration
FIRM – Flood Insurance Rate Map
FPPA – Farmland Protection Policy Act
GIS – Geographic Information Systems
GRP – Gross Regional Product
GW-A – Groundwater A
HCAMP – Habitat Consultation Areas Mapping Program
HCL – High Crash Location
kph – kilometers per hour
Leq – One-hour equivalent sound level
LMA – Labor Market Area
LURC – Maine Land Use Regulation Commission
MASC – Maine Atlantic Salmon Commission
MBPL – Maine Bureau of Parks and Lands
MDEP – Maine Department of Environmental Protection
MDIF&W – Maine Department of Inland Fisheries and Wildlife
MDOC – Maine Department of Conservation
MDOT – Maine Department of Transportation
MDWP – Maine Drinking Water Program

ME-GAP – Maine Gap Analysis Program
MHPC – Maine Historic Preservation Commission
MNAP – Maine Natural Areas Program
MOA – Memorandum of Agreement
MOBILE5b – Mobile Source Emission Factor Model
mph – miles per hour
M.R.S.A. – Maine Revised Statutes Annotated
NAAQS – National Ambient Air Quality Standards
NAC – Noise Abatement Criteria
NEPA – National Environmental Policy Act
NFIP – National Flood Insurance Program
NHPA – National Historic Preservation Act
NHS – National Highway System
NMFS – National Marine Fisheries Service
NOx – Nitrogen Oxides
NPL – National Priority List
NPS – Nonpoint source
NPS – National Park Service
NRCS – Natural Resources Conservation Service
NRIMC – Natural Resource and Information Mapping Center
NRPA – Maine Natural Resources Protection Act
NWI – National Wetlands Inventory
OD – Origin-Destination
OGIS – Maine Office of Geographic Information Systems
ORS – Outstanding River Segment
PAC – Public Advisory Committee
PEM – Palustrine Emergent Wetland
PFO – Palustrine Forested Wetland
PUB – Palustrine Unconsolidated Bottom
ppm – parts per million
PSS – Palustrine Scrub-Shrub Wetland
PLT – Plantation
RCRA – Resource Conservation and Recovery Act
REMI – Regional Economic Models, Inc. of Amherst, MA
ROD – Record Of Decision
S.A.D. – School Administrative District
SCS – Soil Conservation Service (now the NRCS)
SHPO – State Historic Preservation Officer
SIP – State Implementation Plan
STPA – Maine's Sensible Transportation Policy Act
SWPPP – Stormwater Pollution Prevention Plan
T15 R4 – Township 15 Range 4 (example, numbers used vary)
TCP – Traditional Cultural Property
TDM – Transportation Demand Management
TIP – Transportation Improvement Program
TNM – Traffic Noise Model
TSM – Transportation Systems Management
Twp – Township
USA – United States of America
U.S.C. – United States Code
USDA – United States Department of Agriculture

USFWS – United States Fish and Wildlife Service

USGS – United States Geological Survey

VOCs – Volatile Organic Compounds

vpd – vehicles per day

VHT – Vehicle-Hours Traveled

VMT – Vehicle-Miles Traveled

WELS – West of the easterly line of the state (this term is part of naming the unorganized townships of the State)

WPA – Wellhead Protection Area

Study Specific Terms

Aquifer Overlay Zone (AOZ)-It is the intent of this zone to protect the groundwater resources of Gray from contaminants which can reasonably be expected to accompany certain uses of land and thereby to preserve the quantity and quality of this resource for present and future use by individuals, industries, or public bodies.

Business Development District (BD)- This district is located in areas of the community which are most suited for larger scale business activities such as business parks, warehouses, and manufacturing. The purpose of this district is to allow more intense business uses, while protecting the public health and safety, environmental quality and economic well-being of the Town of Gray. Businesses in this area must also maintain the rural character of the community. Community services and road access were important criteria for selecting such areas.

Census Block-Defined as small areas bounded on all sides by visible features such as streets, roads, streams and railroad tracks.

Census Tract-Defined by the U.S. Bureau of Census (1990) as a small, permanent statistical subdivision of a county in a metropolitan statistical area (MSA), delineated by a local committee of census data users for the purpose of presenting decennial census data.

Civilian Labor Force-Comprises all civilians 16 years of age and over that are classified as employed or unemployed during a particular reference week.

Covered Employment-Defined as the count of workers covered by unemployment insurance programs.

Emissions Inventory- is the quantity of a pollutant emitted over a given time period, and is calculated by multiplying source-specific emission factors by source activity levels.

Gray Village-Locally known as the Crossroads of Maine, Gray Village is the commercial and retail center for the Town of Gray. Gray Village is comprised of the following main roads; Gray Village is comprised of the following main roads; Routes 4/115/202 west to Center Street, Route 26 north to Gray Park Road, Route 115 east to Wayne Avenue, and Routes 4/100/202 to Colley Hill Road.

Leq-The equivalent A-weighted sound level that has the same acoustic energy as the fluctuating noise that occurs during the measurement period.

Level of Service (LOS)-A qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers; six levels of service are defined and they are given letter designations, from A to F, with level of service A representing the best operating conditions (very light, free-flowing traffic) to F (congested, stop-and-go traffic).

Lmax-The maximum A-weighted noise level that occurs during the measurement period.

Medium Density District (MD)- This district is located in areas, outside of Gray Village which are currently serviced by public water, with the exception of the area on Route 100 from Whitney Road, south to the Cumberland Town Line. Most of these areas are presently developed for predominately residential uses. It is the intent of this district to recognize present relationships between land use and natural features by preserving the predominant residential character while allowing a somewhat denser development to occur than in other areas of the Town.

Metropolitan Statistical Area (MSA)-Defined as one city with 50,000 or more inhabitants, or a Census Bureau defined urbanized area (of at least 50,000 inhabitants) and a total metropolitan population of at least 75,000

Neighborhood Cohesion-Relates to accessibility, whether pedestrian or vehicular, between integral parts of a community or neighborhood.

Rural Residential and Agricultural District (RRA)-The Rural Residential and Agricultural District is located in the mostly rural and sparsely populated sections of the Town, and extends beyond the areas of Gray that may reasonably be serviced by public water and sewer. It is the intent of this district to encourage low density development which will enhance, reinforce and protect the rural/open space environment currently characterizing these areas of the Town.

Seasonal Housing-Defined by the US Census (1990) as a housing unit that is held for occupancy only during limited portions of the year.

Study Area-Located in the middle of the Town of Gray, encompasses approximately 7.7 square kilometers (three square miles). Described as follows: Routes 4/115/202 from McConkey Road to the west proceeding east to the Maine Turnpike Exit 11 at its intersection with Routes 4/115/202. The Study Area proceeds east and includes Gray Village. The Study Area proceeds north from Gray Village to the Route 26 overpass of the Maine Turnpike. Route 26, at Libby Hill Road, is the northern boundary. The western boundary of the Study Area is from Libby Hill Road to the north, to McConkey Road to the south.

Travel Time-In the context of groundwater, travel time is defined as the number of days it would take a contaminant to travel through the groundwater from the edge of the zone to the water supply well.

Uniform Relocation Assistance and Real Property Acquisition Policies Act-Act stating that no person shall be displaced by federal or federally-assisted construction projects unless adequate replacement housing has been provided for, open to all persons regardless of race, color, religion, sex, national origin or handicap.

Village Aquifer Protection District (VAP)-The Village Aquifer Protection District is the existing commercial and service center of Gray lying within the Aquifer Protection District. This zone is necessary to preserve and enhance the New England character of Gray Village by providing services and shopping opportunities to residents and visitors consistent with protection of the Gray public water supply. This District should promote a comfortable, safe, interesting and visually attractive environment appropriate for pedestrian activity. While this district is over the aquifer and within the area classified as

Aquifer Overlay, only the standards listed in this zone apply. Where there is a conflict, the VAP zone standards apply.

Wellhead Protection District WH1-It is the intent of this district to protect the ground water resources of Gray from contaminants which can reasonably be expected to accompany certain adverse uses of land and thereby to preserve the quantity and quality of these resources for present and future use by individuals, industries, or public bodies. Wellhead Protection District WH1 zone is based on a 2,500 day travel time.

Wellhead Protection District WH2-Same intent as Wellhead Protection District WH2, however, the Wellhead Protection District WH2 represents the 200 day travel time.

Standard Terms

85th Percentile Speed – The 85th-percentile speed is the speed at which eighty-five (85) percent of the vehicles on a given highway travel at or below. The most common application of the value is its use as one of the factors for determining the posted, legal speed limit of a highway section. In most cases, the field measurements for the 85th-percentile speed will be conducted during off-peak hours.

100-Year Floodplain – The portion of the floodplain submerged by the statistical flood event with a 1 percent probability of occurring in any year.

Activity center – Activity centers are generally defined as areas that generate economic activity or areas that support a major industry.

Additional Farmland Soils of Statewide Importance – Soils that are nearly Prime Farmland and that produce high yields of crops when treated and managed according to acceptable farming methods (see definition of “Prime Farmlands” below).

Adverse noise impact – A condition that exists if sound levels approach or exceed the Noise Abatement Criteria (NAC) or a 10-decibel (dBA) increase in ambient noise levels.

Advisory Council on Historic Preservation (ACHP) – The major policy advisor to the Federal government in the field of historic preservation. The 20 members of the Council are appointed by the President and include the Secretary of Agriculture, the Secretary of the Interior, the Architect of the Capitol, the chairman of the National Trust for Historic Preservation, and the president of the National Conference of State Historic Preservation Officers.

Alkaline – With a pH value greater than 7: generally applied to soils and surface water.

Alkalinity – A measure of the capacity of water to neutralize acid. Alkalinity is primarily a function of bicarbonate, carbonate, and hydroxide ions and is typically expressed in parts per million (ppm) of calcium or magnesium ions.

Annual Average Daily Traffic (AADT) – The total yearly traffic volume on a given highway segment divided by the number of days in the year. AADT is expressed in vehicles per day (vpd).

Aquifer – Rock or sediment that is saturated with water and sufficiently permeable to transmit economically significant quantities of water to wells and springs.

Archaeological resources – Materials and objects that remain below the ground surface as evidence of the life and culture of historic, prehistoric, or ancient people, such as artifacts, structures, or settlements. Resources of concern are located in areas known or suspected to contain subsurface artifacts of pre-european or post-european settlement populations. Areas of expected moderate to high archaeological sensitivity according to various factors including present and past topography, exposure, slope, distance to water, and availability of food.

Archaeologically Sensitive Shorelines – Shores of waterbodies determined by the Maine Historic Preservation Commission (MHPC) to be likely to yield prehistoric artifacts, based on a predictive model using topography, hydrology, and surficial soil types to assess sensitivity.

Archaeologically Sensitive Surficial Deposits – Land forms that are likely locations of prehistoric settlements or gathering places, based on a MHPC predictive model that uses surficial geology (waterbodies, alluvium, lake bottom deposits, glacial outwash, and eskers) to assess sensitivity.

Army Corps of Engineers (ACOE) – A federal agency that administers Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act; its regulatory programs address wetlands and waterways protection.

Arterials – Roads with high traffic volumes that provide linkage between major cities and towns and developed areas, capable of attracting travel over long distances. Basically, they provide service to interstate and intercounty travel demand. The arterial

system typically provides for high travel speeds and the longest trip movements. The degree of access.

At-grade –The intersection of two roads, or a road and a railway, that cross at the same elevation.

At-Risk Watershed – Watersheds contributing to waterbodies that are at risk of eutrophication due to new development and phosphorus-laden runoff. These waterbodies include public drinking water supplies and waters that currently exhibit algal blooms or other signs of eutrophication. At-risk watersheds are defined according to criteria in Maine's Stormwater Law (5 M.R.S.A. § 3331).

Attainment area – A geographic area in which levels of a criteria air pollutant meet the health-based primary standard (National Ambient Air Quality Standard) for the pollutant. Attainment areas are defined using federal pollutant limits set by the U.S. Environmental Protection Agency.

Avian – Refers to all things of, relating to, or derived from birds

Basaltic – A dark-colored extrusive igneous rock composed chiefly of calcium plagioclase and pyroxene that underlies the oceanic basins and comprises oceanic crust.

Best Management Practice (BMP) – A structural and/or management practice employed before, during and after construction to protect receiving water quality. These practices either provide techniques to reduce soil erosion or remove sediment and pollutants from surface runoff.

Biodiversity –The diversity of genes, species, and ecosystems. This term includes the entire hierarchy of ecological organization, and encompasses regional ecosystem diversity (landscape diversity), local ecosystem diversity (community diversity), species diversity, and genetic diversity within populations of a species.

Biophysical region – A relatively homogeneous area based on analysis of topography, climate, and species richness of vertebrates and plants.

Business incubator – A facility intended to provide space and resources for newly-formed businesses.

Calcareous pelite – A fine-grained sedimentary rock consisting mostly of clay and/or silt that has an abundance of calcium carbonate.

Cambrian – The first geologic time period of the Paleozoic Era. The Cambrian period spanned from approximately 590 to 505 million years ago.

Carbon monoxide (CO) – A colorless, odorless, tasteless gas formed in large part by incomplete combustion of fuel. Full combustion activities (i.e. transportation, industrial processes, space heating, etc.) are the major sources of CO.

Collector Roads – Roads characterized by a roughly even distribution of their access and mobility functions. These routes gather traffic from local roads and streets and deliver it to the arterial system. Traffic volumes and speeds will typically be lower than those of arterials.

Commercial Port – In the context of this study, a commercial port is a Maine-Canada border crossing that can accept commercial shipments without requiring a special permit in advance of the trip. Houlton is the only full commercial port in the Study Area (Calais and Jackman are other full commercial ports between Maine and Canada outside the Study Area). The other border crossings in the study area are permit ports where the U.S. Customs Service requires freight carriers to apply for a permit to enter the U.S..

Community Cohesion – The interactions among persons and groups in a community, including social relationships and patterns.

Community Supply – A public water system that serves at least 25 residents throughout the year; comprised of one or multiple wells or reservoirs.

Conglomerate – A clastic sedimentary rock composed of lithified beds of rounded gravel mixed with sand.

Controlled-Access Highway – A highway that provides limited points of access and egress. Freeways, such as I-95, are controlled access highways in which access points

occur only at interchanges. These highways serve mobility needs, and are designed to accommodate higher travel speeds.

Cost effectiveness – In the context of this study, cost effectiveness is an economic measure used to evaluate and compare the corridors in this study. Cost effectiveness is defined as the present value of the (insert year) gross regional product (GRP) growth per dollar of construction cost. In this way, cost effectiveness compares the relative future economic benefits against the size of the investment required to generate those benefits.

Cumulative impacts – The impacts on the environment that result from the incremental impact of a project when added to other past, present, and reasonable foreseeable future actions regardless of what agency or person undertakes such other actions.

Daily traffic volume – The number of vehicles that use a given roadway over a 24-hour period in both directions.

dBA –An abbreviation for A-weighted decibel. The decibel is a unit used to describe sound pressure levels on a logarithmic scale. For community noise impact assessment, an A-weighted frequency filter is used to approximate the way humans hear sound.

Deciduous – Refers to woody vegetation, such as oak or maple trees, that shed their leaves after the growing season.

Deer Yard – Areas of softwood-dominated forest that provide food resources and shelter for deer during severe winter conditions.

Demand – Vehicular traffic demand (volume) on a given highway segment, expressed in vehicles per day (vpd).

Demand shift – The change in demand (volume) on a given highway segment, expressed in vehicles per day (vpd). Demand shifts can be caused by new corridors that provide a faster and/or shorter travel route.

Design Hourly Volume (DHV) – The hour used for geometric design of highways, typically the 30th highest traffic volume of the year.

Design speed – The maximum safe speed that can be maintained over a specified section of highway when conditions are so favorable that the design features of the highway govern. The design speed should equal or exceed the posted/regulatory speed limit of the facility.

Development node – An area that has experienced or is expected to experience development and a resulting growth in employment and/or population.

Devonian – The oldest period of the Upper Paleozoic Era, covering a time span between approximately 400 and 360 million years ago.

Disadvantaged Population – A group of people, living in one area, who have a median income below the federal poverty level, or who exhibit other indicators of economic disadvantage.

Dolostone – A carbonate rock made up predominantly of the mineral dolomite, $\text{CaMg}(\text{CO}_3)_2$.

Draft Environmental Impact Statement (DEIS) – The document prepared by the Federal Highway Administration (FHWA) in accordance with FHWA National Environmental Policy Act (NEPA) regulations (23 CFR Part 771.123). These regulations require that the EIS evaluate all reasonable alternatives considered, discuss the reasons that alternatives have been eliminated from detailed study, summarize the studies, reviews, consultations, and coordination required by environmental laws and Executive Orders.

Driver eye height – The height above the road of the eyes of vehicle drivers, a function of the seating height, and important in stopping sight distance considerations.

Ecoregion – An area defined by similar climate, topography, and biological communities.

Edge effect – The potential impacts to natural plant and animal communities that result from the creation of new edge habitat, which may include increased predation, decreased reproductive success, and changes in community composition.

Edge habitat – An area along a transitional zone between two or more vegetation cover types that provides feeding, breeding, nesting, or cover habitat for wildlife.

Endangered Species – Any species which is in danger of extinction throughout all or a significant portion of its range.

Environmental Justice – Executive Order 12898 requires each federal agency to “make achieving environmental justice part of its mission by identifying and addressing... disproportionately high and adverse human health or environmental impacts on minority populations and low-income populations.”

Esker – An elevated linear or sinuate glacial landform resulting from deposition of glacial streambed gravels.

Essential Fish Habitat (EFH) – Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity, as defined by the regional Fishery Management Council.

Eutrophication – Change in the biological and physical characteristics of a body of water due to increased nutrient input that results in increased productivity. Eutrophication may occur naturally or through man-induced changes in nutrient inputs.

Farmland Protection Policy Act (FPPA) – A statute enacted in 1981 by the United States Department of Agriculture (USDA) to ensure that significant agricultural lands be protected from conversion to non-agricultural uses. For highway projects receiving federal aid, the regulations promulgated under the FPPA (7 CFR Part 658, 1984) require a state highway authority (MDOT) to coordinate with the USDA Natural Resources Conservation Service. The FPPA regulates four types of farmland soils; prime farmland, unique farmland, farmland of state-wide importance, and farmland of local importance.

Farmland Soils – Soils suited to producing crops; those with soil quality, growing season and moisture supply needed to produce a sustainable yield when treated and managed using acceptable methods. Specifically, farmland soils are those soil types designated by the Natural Resources Conservation Service (NRCS) in accordance with the Farmland Protection Policy Act (FPPA) of 1981 by the United States Department of Agriculture (USDA).

Federal Emergency Management Agency (FEMA) – A federal agency that regulates federal actions in floodplains.

Federal Highway Administration (FHWA) – The branch of the U.S. Department of Transportation responsible for administering the funding of federal-aid highway projects.

Federal-Aid System – The federal-aid system consists of those routes within Maine that are eligible for the categorical federal highway funds.

Felsic – A generally light-colored igneous rock with significant amounts of silica, oxygen, aluminum, and potassium.

Final Environmental Impact Statement (FEIS) – The document prepared after circulation of a draft EIS and consideration of comments received. FHWA NEPA regulations (23 CFR Part 771.125) require that the FEIS identify a preferred alternative, evaluate all reasonable alternatives considered, discuss and respond to substantive comments on the EIS, summarize public involvement, and describe the mitigation measures that will be incorporated into the proposed action.

Floodplain – The level area adjoining a river channel inundated during periods of high flow.

Floodway – The channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order that the 100-year flood be carried without substantial increases in flood heights.

Forest block – Units of forest uninterrupted by roadways or other disturbance.

Fragmentation – Subdivision of a forest or other habitat into isolated patches by roads, land clearing, or other human or natural alterations of the landscape, accompanied by the loss of a certain portion of the original habitat.

Freeways – The freeway (or interstate) is the highest level of arterial. Full control of access, high design speeds and a high level of driver comfort and safety characterize these highways.

Functional Conflict – Highways provide a balance between providing access (with multiple access points) and mobility (with limited access points). Freeways are designed to maximize mobility and serve regional traffic demands as opposed to local roads (or collectors) that provide multiple access points to adjacent land uses (residences or businesses). Functional conflicts arise when regional traffic that would be better served on an Freeway uses local roads.

Geographic Information System (GIS) – A computer-based application used to perform spatial analysis.

Geometric deficiency - A deficiency that occurs when a highway's geometric characteristics (lane width, shoulder width, horizontal curvature, vertical grade, etc.) do not meet prevailing design standards.

Glacial outwash – Surficial sand and gravel sediments deposited ahead of a glacier by glacial meltwater.

Glacial till – Compact surficial sediments consisting of poorly sorted, mixed minerals and rocks, deposited by melting glaciers.

Grade – The slope of a road along the direction of travel, normally characterized by the vertical rise per unit of longitudinal distance.

Grade separation – The intersection of two roads, or a road and a railway, that cross at different elevations. One roadway overpasses or underpasses the other roadway with a structure(s).

Gross Regional Product (GRP) – Gross Regional Product is one of the major economic indices of the socio-economic development of a region. GRP is equal to the total of added values in the regional economic industries, estimated as a difference between production and intermediate consumption.

Groundwater Recharge Protection Areas – Areas of land designated by water resource agencies through that rainwater or snowmelt percolate and replenish the underlying aquifer in the area of a public well. These areas require special protection because they directly affect the quality and safety of the public drinking water supply.

GW-A – The highest groundwater classification in Maine. GW-A is applied to water suitable for direct human consumption without treatment.

Habitat Consultation Areas Mapping Program (HCAMP) – A cooperative program of the MDIF&W and MNAP to provide mapping showing the areas of state-listed endangered and threatened animals and plants.

Herpetofauna – Refers to reptile and amphibian species.

High Crash Location (HCL) – A High Crash Location is an intersection or highway segment that experiences an abnormally high number of accidents relative to the traffic demands that are served. For the State of Maine, the Maine Department of Transportation identifies HCLs.

Highway Reconstruction/Rehabilitation – Reconstruction of an existing highway is undertaken when the pavement structure or alignment of the existing facility is deficient. Reconstruction includes removal and replacement of the entire pavement structure, significant changes in the vertical or horizontal alignment, or addition of lanes. Rehabilitation includes resurfacing and other minor repairs intended to extend the service life of the existing facility and enhance highway safety.

Historic resources – Properties, structures and districts that are listed in or have been determined to be eligible for listing in the National Register of Historic Places.

Hourly traffic volume – The number of vehicles that use a given road over a 1-hour period.

Hydric soils – Soils that are saturated, flooded, or ponded long enough during the growing season to develop at least temporary conditions where there is no free oxygen

in the soil around the roots. Hydric soils correspond to federally and state regulated wetlands in many circumstances.

Hydrologic regime – The frequency and duration of inundation or soil saturation of a given area.

Impervious surface – Relating to hydrology. A surface through which precipitation cannot penetrate, causing direct runoff or perching (examples include asphalt paving roofs, and densely compacted gravel).

Interstate – A freeway-type highway that is part of the National Highway System.

Interstate Highway System – The network of Interstate Highways established by the Federal-Aid Highway Act of 1956. The statute established a 41,000-mile network of controlled-access highways (expanded to 42,000 miles by legislation in 1968) intended to connect all metropolitan areas with populations greater than 50,000 and all state capitals.

Just-In-Time Delivery – Commercial deliveries that arrive immediately prior to their use. Just-in-time deliveries help producers minimize storage or warehousing space.

Kettle – A depressional glacial landform resulting from a melting block of ice embedded in till.

Labor Market Area (LMA) – Labor market areas are regional areas with a high concentration of employment opportunities. These are economically integrated units within which workers may readily change jobs without changing their place of residence.

Lacustrine – Of and related to lakes.

Land and Water Conservation Fund – A system for funding Federal, State and local parks and conservation areas, created by the Land and Water Conservation Fund Act of 1964.

Limited-Access facility – A highway where access to abutting properties is restricted or limited by control of the right-of-way.

Link – A new or existing highway segment between two defined end-points.

Lithic sandstone (graywacke) – A variety of sandstones characterized by angular-shaped grains of quartz and feldspar and small fragments of dark rock set in a matrix of finer particles.

Local Roads and Streets – All public roads and streets not classified as arterials or collectors will have a local classification. Local roads and streets are characterized by many points of direct access to adjacent properties and have relatively minor role in accommodating mobility. Speeds and traffic volumes are usually low.

Mafic – A generally dark-colored igneous rock with significant amounts of one or more ferromagnesian minerals, or formed from a magma with significant amounts of iron and magnesium.

Magnuson-Stevens Fishery Conservation and Management Act – Legislation (16 U.S.C. 1855(b)) governing all fisheries resources within 320 kilometers (200 miles) of the U.S. coast that established regional Fishery Management Councils and required the preparation of Fisheries Management Plans.

Maine Highway Design Guide – A tool developed by the Maine Department of Transportation that provides guidance for the design of roads and highways in the State of Maine in addition to the Federal Highway Administration design criteria.

Maine Land Use Regulation Commission (LURC) – Title 12, M.R.S.A., Chapter 206 – A Commission established by Title 12, M.R.S.A., Chapter 206 to administer the Land Use Regulation Law (12 M.R.S.A. § 681) by preparing land use standards prescribing standards for the use of air, lands and waters within the plantations and unorganized townships of Maine.

Maine's Sensible Transportation Policy Act (STPA) – Maine's Sensible Transportation Policy Act is a state law enacted in 1991 by the citizens of Maine that provides a decision making framework for examining a range of alternatives. The STPA is applicable to transportation planning decisions, capital investment decisions, and project selection decisions made by the Maine Department of Transportation (MDOT).

Maine State Design Standards – State adopted (February 1997) travelway and shoulder design width criteria for non-National Highway System facilities.

Major Collector Road – Collector Roads that tend to serve higher traffic volumes than other Collector Roads. Major collector roads typically link arterials. Traffic volumes and speeds will typically be lower than those of Principal Arterials.

Mesoscale air quality analysis – A regional-level analysis of air for chemical constituents

Metamorphosed – With respect to rock, a rock formation that has been altered by the action of heat and pressure.

Microscale air quality analysis – An analysis of air for chemical constituents, typically conducted for a small study area such as an intersection.

Mill Rate – The property tax rate, per \$1,000 of assessed value.

Minor Arterial – Minor arterials are highways that tend to link Collector Roads to Principal Arterials and serve lower traffic volumes than typical arterials. Minor Arterials are also typically designed at lower travel speeds than Principal Arterials.

Mitigation – Actions that avoid, minimize, or compensate for potential adverse impacts.

Multi-modal service – The act of providing alternative modes or choices of transportation service, such as bus, rail, taxi, etc.

National Ambient Air Quality Standards (NAAQS) – The prescribed level of pollutants in the outside air that cannot be exceeded during a specified time in a specified geographic area.

National Environmental Policy Act of 1969, as amended (NEPA) – The federal legislation that requires an interdisciplinary approach in planning and decision-making for federal-aid actions. The Act includes requirements for the contents of environmental impact statements that are to accompany every recommendation for major federal actions significantly affecting the quality of the human environment. The interdisciplinary study approach includes the analysis of potential impacts to the natural, social and economic environment.

National Highway System (NHS) – The National Highway System is a system of those highways determined to have the greatest national importance to transportation, commerce and defense in the United States. It consists of the Interstate highway system, logical additions to the Interstate system, selected other principal arterials, and other facilities that meet the requirements of one of the subsystems within the NHS.

National Historic District – An area, comprising numerous buildings and their setting, identified as historic in the National Register of Historic Places.

National Priority List (NPL) – The “Superfund” statute (42 U.S.C. Sect. 9601) requires the EPA to establish a National Priorities List of sites which are to be given top priority consideration for removal of hazardous substances and remedial action.

National Register of Historic Places – A list of structures, sites and districts of national historical significance as determined by the Advisory Council on Historic Preservation under the National Historic Preservation Act.

National Wetlands Inventory (NWI) – A program administered by the U.S. Fish and Wildlife Service for mapping and classifying wetland resources in the United States.

Natural Resources Conservation Service (NRCS) – Formerly the Soil Conservation Service, NRCS is a department within the United State Department of Agriculture, that is responsible for administering the Farmland Protection Policy Act.

New Location Highway – A highway proposed to be constructed on land not currently used for transportation facilities.

Nitrogen Oxides (NOx) – Nitric oxide (NO) and Nitrogen dioxide (NO₂) are collectively referred to as oxides of nitrogen (NO_x). NO forms during high temperature combustion process. NO₂ forms when NO further reacts in the atmosphere. NO_x reacts with the sunlight to form ozone, a colorless gas associated with smog or haze conditions. Ozone is a pollutant regulated by the Clean Air Act Amendments of 1990.

Noise abatement criteria (NAC) – Noise levels measured in decibels that are used as a basis of comparison for evaluating the impact from predicted design year noise and for determining whether noise abatement measures should be considered.

Noise abatement measures – Actions that reduce traffic noise impacts. Noise abatement measures can be traffic management measures, alteration of horizontal and vertical alignments, acquisition of property rights for construction of noise barrier, construction of noise barriers, acquisition of real property or interest for buffer zones, or noise insulation of public use or nonprofit institutional structures.

Noise receptor – Locations that may be affected by noise: sensitive receptors include residences, parks, schools, churches, libraries, hotels, and other public buildings.

Non-Community Supply – A public water system that serves at least 25 persons at least 60 days out of the year and is not a community or a seasonal water system.

Non-Point Source pollution (NPS) – Pollution of waterbodies that does not originate at a single specific source such as an industrial discharge or discharge from a wastewater treatment plant. Sources of non-point pollution include runoff from highways, agricultural fields, golf courses, and lawns.

Other Principal Arterial – Highways that provide access between arterials and a major port, airport, public transportation facility or other intermodal transportation facility. Other Principal Arterials tend to serve lower traffic demands than Principal Arterials.

Outstanding River Segment (ORS) – A section of a river or stream designated by the Maine Natural Resources Protection Act (12 M.R.S.A. § 403) for protection because of the special resource values of its flowing waters and shorelines.

Ozone – A gas which is a variety of oxygen. Ozone is a pollutant regulated by the Clean Air Act Amendments of 1990. Ground-level ozone is the main component of smog. Ozone is not directly emitted by motor vehicles, but is formed when oxides of nitrogen react with sunlight.

Palustrine – The group of vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie. Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes.

Palustrine Forested Wetland (PFO) – A palustrine wetland dominated by trees, commonly referred to as a swamp.

Palustrine Emergent Wetland (PEM) – A palustrine wetland dominated by herbaceous species, typically cattails, sedges and grasses, commonly referred to as a marsh.

Palustrine Scrub-Shrub Wetland (PSS) – A palustrine wetland dominated by shrubs.

Passing Sight Distance – The distance a passing vehicle on a two lane road will travel during a passing movement, plus an equal distance that an oncoming vehicle will travel during that time, plus a clearance distance or safety factor.

Peak hour – The hour of the day when traffic volume on a given roadway is highest. A separate peak hour can be defined for morning and evening periods.

Peak hour volume – The traffic volume that occurs during the peak hour, expressed in vehicles per hour (vph). Peak hour volumes are typically 10 to 15 percent of daily volumes.

Peak Hour Leq – Represents the noisiest hour of the day/night and usually occurs during peak periods of motor vehicle traffic. The Leq is the equivalent sound level measurement, which means it averages background sound levels with short-term transient sound levels and provides a uniform method for comparing sound levels that vary over time.

Posted speed limit – The speed posted for a facility based on engineering and traffic investigation.

Prehnite – A silicate mineral that forms in the cavities of basaltic rocks, low temperature hydrothermal fissures, and in limestone.

Primary/direct impacts – The immediate effects on the social, economic, and physical environment caused by the construction and operation of a highway; these impacts are

usually experienced within the right-of-way or in the immediate vicinity of the highway or other element of the proposed action.

Prime Farmland Soil – Soil map units that are designated by the Natural Resources Conservation Service as having the properties needed to produce sustained high yield crops when managed with modern farming techniques.

Principal Arterials – Highways in rural and urban areas that connect urban areas, international border crossings, major ports, airports, public transportation facilities or other intermodal transportation facilities.

Pumpellyite – A silicate mineral, closely related to epidote, that forms in pelitic and dolomite rocks.

Rare and Exemplary Natural Community – An assemblage of interacting plants and animals and their common environment, recurring across the landscape, in which the effects of recent human interference are minimal. Rare natural communities are those which occur infrequently. Exemplary natural communities are exceptional representatives of more common natural communities.

RCRA Generator – An entity that produces hazardous waste regulated under the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. sect. 6901), which mandates the appropriate identification, tracking, and disposal of hazardous waste.

Record of Decision (ROD) – The document, prepared by the Federal Highway Administration, that presents the basis for the Federal agency action, summarizes any mitigation measures to be incorporated, and documents any required Section 4(f) approvals. No Federal agency action may be undertaken until a Record of Decision has been signed. A Record of Decision is prepared no sooner than 30 days after the public release of the FEIS.

Relocations – The displacement of a residence, business or other structure from a property owner, for public use, that requires the residents or business to be moved to an alternate location.

REMI Model – The REMI Model (Regional Economic Models Inc.) is a widely used and accepted econometric model maintained and updated by the Center for Business and Economic Research at the University of Southern Maine.

Riparian – An area of land that encompasses and is contiguous to a stream or other water body.

Riverine – Of and relating to rivers.

Rural – A rural community is defined as an area with: 1) a population less than 2,500 persons or; 2) a population between 2,500 and 6,000 persons and a worker-to-resident worker ratio less than 1.0.

Safety deficiency – In the context of this study, a safety deficiency is a highway segment or intersection that contains a high crash location (HCL).

Secondary impacts – Impacts that are caused by the proposed action and are later in time or farther removed in distance, but are still reasonably foreseeable; secondary impacts may include induced changes to land use patterns, population density or growth rate, and related effects on natural systems, including ecosystems.

Section 10 of the Rivers and Harbors Act of 1899 (Section 10) – Legislation (33 U.S.C. Section 403) that resulted in a permit being required from the Army Corps of Engineers for projects requiring construction in or over navigable waters, the excavation from or dredging or disposal of materials in such waters, or any obstruction or alteration in a navigable water (e.g. stream channelization).

Section 106 of the Historic Preservation Act (Section 106) – The National Historic Preservation Act of 1996 (16 U.S.C. 470f), Section 106, requires Federal agencies to take into account the effect of their undertakings on properties included in or eligible for inclusion in the National Register of Historic Places and to afford the Advisory Council on Historic Preservation the opportunity to comment on such undertakings.

Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C., Section 303) (Section 4(f)) – Legislation protecting publicly owned parks, public recreation

areas, historic properties or wildlife and waterfowl refuges. The statute states that no Department of Transportation project may use land from these areas unless there is demonstrated to be no prudent and feasible alternative to using the land, and the project includes all possible planning to minimize harm resulting from the use.

Section 404 of the Clean Water Act (Section 404) – The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 401 et seq.) is the enabling legislation for protection of waters of the United States by the Army Corps of Engineers and the U.S. Environmental Protection Agency.

Section 6(f) of the Land and Water Conservation Funds Act (Section 6(f)) – Legislation that provides for the public purchase and preservation of tracts of land.

Sight distance – The distance that a driver can see along the roadway before curvature or obstructions block the view.

Significant Sand and Gravel Aquifer – A porous formation of ice-contact and glacial outwash sand and gravel that contains significant removable quantities of water which is likely to provide drinking water supplies.

Significant Wildlife Habitat – Wildlife habitats, including deer wintering yards, waterfowl and wading bird habitat, seabird nesting habitat, and significant vernal pools, that are protected under 38 M.R.S.A. § 480-B.

Silurian – The third geologic time period of the Paleozoic. The Silurian period lasted from approximately 438 to 408 million years ago.

Sole Source Aquifer (SSA) – An aquifer designated by EPA as the “sole or principal source” of drinking water for a given aquifer service area; that is, an aquifer that is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should the aquifer become contaminated.

State Implementation Plan (SIP) – A plan created under The 1990 Clean Air Act Amendments (CAAA) that establishes emission reduction requirements for ozone and carbon monoxide non-attainment areas. Proposed projects must demonstrate that the impacts of their emissions are consistent with the appropriate SIP.

Stormwater Pollution Prevention Plan (SWPPP) – A plan required for major construction projects under the EPA’s National Pollutant Discharge and Elimination System (NPDES) general permit for construction activities. The SWPPP is required to address measures to prevent erosion, sedimentation, and other potential discharges of pollutants to water bodies and wetlands.

Stormwater runoff – The portion of precipitation that flows toward stream channels, lakes, or other waterbodies as surface flow.

Surface Water Supply Watershed – The watershed that contributes to a public drinking water supply.

System compatibility – System compatibility describes how well alternatives, either new highways or upgrades, fit into the existing highway network and the planned transportation improvement plan.

System continuity – System continuity is defined by how often the existing highways transition between wide, higher speed segments to narrow, low speed segments.

Threatened Species – Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Traditional Cultural Property (TCP) – A property or site that is eligible for inclusion in the National Register of Historic Places because of its association with cultural practices or beliefs of a living community that are rooted in that community’s history and are important to maintaining the continuing cultural identity of the community.

Traffic generator – Any business, government office, or place of employment or destination that generates or attracts traffic.

Transportation deficiencies – A highway related facility that is unable to safely and efficiently satisfy travel demands because of the intensity of traffic volumes, capacity, and/or safety.

Transportation Demand Management (TDM) – A system of actions whose purpose is to alleviate traffic problems through improved management of vehicle trip demand as opposed to adding new highway segments.

Transportation Improvement Program (TIP) – A staged multiyear program of transportation projects funded by the Federal Highway Administration and Federal Transit Administration.

Transportation Systems Management (TSM) – Relatively low cost measures to increase capacity and/or provide safety improvements on the existing transportation system. These measures typically include traffic signal timing or phasing adjustments, designation of turning lanes at specific intersection or driveways, access management improvements, and enhanced signage or markings.

United States Department of Agriculture (USDA) – A federal agency responsible for administering programs that address farming issues

United States Environmental Protection Agency (EPA) – A federal agency responsible for administering programs that address environmental issues.

United States Fish and Wildlife Service (USFWS) – A federal agency responsible for addressing the protection of fish and wildlife including rare, threatened, or endangered species. The USFWS plays an advisory role in the Section 404 regulatory program administered by the U.S. Army Corps of Engineers.

Upgrade – A geometric improvement to an existing highway segment.

Upper Devonian – The Devonian Period, which lasted from approximately 408 to 360 million years ago, contains three epochs. The Upper Devonian Epoch lasted from approximately 365 to 360 million years ago.

Urban – An urban community is defined as an area with: 1) a population greater than 7,500 persons or; 2) a population between 2,500 and 7,500 persons and a worker-to-resident worker ratio greater than 1.0.

Vegetation cover type – A biological community characterized by certain vegetation characteristics, such as hardwood forest, mixed forest, shrub, herbaceous, and urban or residential managed vegetation.

Vehicle-Hours Traveled (VHT) – VHT is a measure of automobile use and trip time. One vehicle traveling one hour constitutes one vehicle-hour.

Vehicle-Miles Traveled (VMT) – VMT is a measure of automobile use and trip length. One vehicle traveling one mile constitutes one vehicle-mile.

Vernal pool – A temporary pool of surface water that provides breeding habitat for certain amphibian and invertebrate species.

Volatile Organic Compounds (VOCs) – Colorless gaseous compounds originating, in part, from the evaporation and incomplete combustion of fuels. In the presence of sunlight VOCs react to form ozone, a pollutant regulated by the Clean Air Act Amendments.

Waterfowl and Wading Bird Habitat – Wetlands that provide habitat for waterfowl (geese, brant, ducks) and wading birds (heron, egrets, bittern, rails), and that meet certain criteria for size, quality, and percent open water as established by Department of Inland Fish & Wildlife regulations.

Watershed – A region or area that contains all land ultimately draining to a water course, body of water, or aquifer.

Wellhead Protection Area (WPA) – Areas of land where human activities are regulated to protect the quality of ground water that supplies public drinking water wells.

Wetland – Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wild and Scenic River – A river or river segment, designated by the National Park Service, because of the outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values (16 U.S.C. 1271-1287).